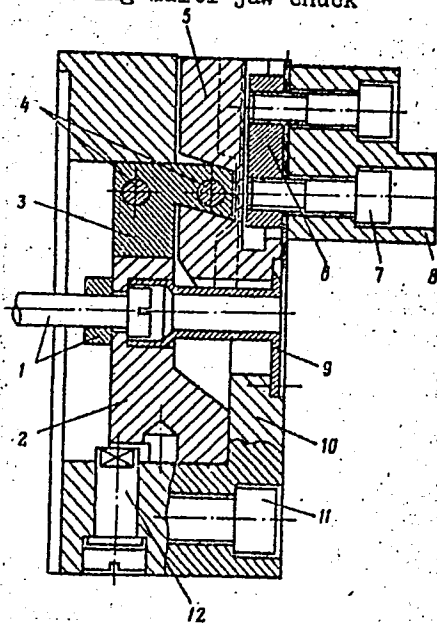


High-speed self-centering multi-jaw chuck

Figure

S/276/63/000/001/012/028  
A006/A101



Card 3/3

LAZAROVITS, L

21. The investigation of coaxiality of machine tools. Description of a new method. Egy új eljárás ismertetése (koaxialitás) vizsgálata szerszámgepeknél. Egy új eljárás ismertetése - by L. Lazarovits (Machinery - Gep - Vol. III, No. 4-5, pp. 185-192, April-May 1951, 34 figs.)

Coaxiality is a geometrical concept and means that two or more rotation surfaces have a common axis of rotation. In trade language, machine elements in this position are said to be in alignment. In this sense it can be stated that a single axis is also in alignment. By eccentricity is meant the greatest deviation between the center, of the cross-section and the center of rotation, and by the beat is meant the resultant of eccentricity and of the greatest measurable deviation on the periphery by means of an indicator gauge, i.e. of the fault in respect to the actual shape of the circle. Only the latter can be measured. After describing the already known methods of measurement, a new procedure is presented, by means of which it is possible to measure easily and expediently the coaxiality of the main spindle and the tail-stock center or turret of c.g. milling machines, lathes, turret lathes and other machine tools. The essential feature of the required tool is that it comprises two equal diameter mandrels, from each of which slightly more than half the diameter has been removed from its free (non-chucked) part, so that when the two mandrels are chucked opposite to each other a definite clearance is left between

of (over)

32.  
L. LAZAROVITS

them. In case of coaxiality this clearance should on the one hand be parallel, and on the other hand as large as is necessary to replace the missing parts of the two half-cylinders, and, finally, the mandrels should not alter the size of this gap during rotation. All deviations point to the defects of coaxiality which can be easily determined by a clearance indicator gauge.

JP

LAZAROVITS, Laszlo

Standardization problems of single purpose machines and  
production lines. Gep 14 no.5:177-183 My '62.

1. Magyar Szabványügyi Hivatal.

LAZAROVITS, Laszlo, okleveles gepeszmernok

On the symbols of hydraulic drive and automatic control.  
Szabvany kozl 16 no.5:69-73 My'64.

1. Hungarian Bureau of Standards, Budapest.

LAZAROVITS, L.

Grate for the immediate fixation in size of fluoroscopic picture.  
Orv. hetil. 92 no.1:30-31 6 Jan 1951. (CIML 24:2)

1. Doctor.

LAZAROVITS, L.; KAROLYI, I.

The evaluation of liver damage in arsenobenzol therapy and its elimination. *Borogygy. vener. szemle* 7 no.2:43-44 Mar 1953. (CIML 24:5)

1. Doctors. 2. National Institute of Skin and Venereal Diseases (Director Prof. Dr. Ferenc Foldvari).

EXCERPTA MEDICA Sec.13 Vol.10/6 Dermatology June 56

1582. LAZAROVITS L. \*Májartalmak a syphilisnél és a kezelés folyamán. Liver damages in syphilis and during its treatment HUNG.DERM. VENER.REV. 1955, 31 (15)

In the years 1947 and 1948 the author observed 134 cases of liver damage in 770 syphilitic patients. This count (17.4%) exceeds the usual proportion. Independently from this, the author examined 168 cases of hepatitis occurring in syphilitic patients; in 16 cases the cause was the syphilitic infection itself, in the remaining 152 cases there was hepatitis cum ictero (61) and without (91); in both groups the liver alterations were caused by arsphenamine. The hepatitis of syphilitic origin could be well controlled by penicillin, those caused by arsphenamine, by diet and other corresponding treatments.

Földvári - Budapest

FEKETE, Zoltan, dr.; LAZAROVITS, Lajos, dr.; NEMEN, Fuhrer, Laszlo,  
dr.; ORBAN, Tamas, dr.

New aspects of the clarification of non-anamnestic sero-positive  
cases of syphilis, with special regard to cardiolipin reactions.  
Orv. hetil. 96 no.49:1351-1355 4 Dec. 55.

1. Az Orszagos Bor-Nemikortani Intezet (igazgato: Foldvari Ferenc  
dr. egyet. tanar) es a Budapest Fovarosi Bor-Nemibeteggyendozo  
Intezetek (igazgato: Karolyi Istvan dr.) kozlemenye.  
(SYPHILIS, diag.

serodiag., comparative study on false-positive  
reactions in various tests (Hun))

LAZAROVITS, Lajos, dr.

Catamnestic studies in cardiovascular and neurosyphilis. *Borogygy.*  
vener. szemle 10 no.2:67-73 March 56

1. Az Országos Bor-Nemikortani Intezet (igaz.: Foldvari Ferenc dr.  
egyetemi tanar) kozl.

(SYPHILIS, CARDIOVASCULAR

late, catamnestic data on 800 patients (Hun))

(NEUROSYPHILIS

same)

LAZAROVITS, Lajos, dr.

Possible prevention and therapy of parenchymatous keratitis.  
Borgyogy. venger. szemle 38 no.4:152-153 Ag '62.

1. Az Orszagos Bor- es Nemikortani Intezet (igazgato: Foldvari Ferenc  
dr. egyetemi tanar) kozlemenye.  
(KERATITIS ther)

LAZAROVITS, Lajos, dr.

Examination, after 10-30 years, of patients treated in the early phase of syphilis with arsenobenzene. Borgyogy. vener. szemle 39 no. 4:155-159 Ag '63.

1. Az Országos Bor-Nemikortani Intezet (Igazgató: Foldvari Ferenc dr. egyetemi tanár) közleménye.  
(SYPHILIS) (ARSENICALS)

LAZAROVITS, Laszlo

On the standardization of the lathe spindle heads and fittings.  
Szabvany kozl 13 no.12:280-286 D '61.

LAZAROVITS, Laszlo, okleveles gepeszmernok

Hungarian standard MSZ 14402-63: Kinematic Network of  
Machine Tools; conventional symbols for mechanical component  
parts. Szabvány kozl 16 no. 4:57 Ap '64.

1. Hungarian Bureau of Standards, Budapest.

LAZAROVITS, Laszlo, okleveles gepeszmernok

Contribution to hydraulic drive and the symbols of automatic control. Szabvany kozl 16 no. 6:94-99 Je '64.

1. Hungarian Bureau of Standards, Budapest.

LAZAROVSKI, S.

The Thirteenth Session of the United Nations' Committee on  
Electric Power at Geneva. p.16 ELEKTORENERGIJA. (Ministerstvo  
na elektrifikatsiata i Profsoiuz na elektroabotnitsite) Sofia.  
Vol. 7, No. 2, February 1956

SOURCE: East European Accessions List, (EEAL) Library of  
Congress, Vol. 5, No. 11, November 1956

LAZAROVSKI, S.; KRISTOVA, V.

LAZAROVSKI, S.; KRISTOVA, V. Automatic breaks on the 15 and 20-kilovolt  
cables in our electric system. p. 4.

Vol. 7, No. 3, Aug. 1956.

ELEKTROENERGIJA.

TECHNOLOGY

Sofia, Bulgaria

So: East European Accession, Vol. 6, No. 3, March 1957

LAZAROVSKI, S.; KONSTANTINOV, E.; PETKOV, L.

The question of reconstructing the Bulgarian 60 kw. electric system to 110 kw. voltage. p. 18.

Spravochnik po tsvetni metali i splavi. Sofia, Bulgaria. Vol. 10, no. 8/9, Aug./Sept. 1959.

Monthly List of East European Accessions (EFAI), LC, Vol. 9, No. 2, February, 1960. Uncl.

LAZAROVSKI, S., inzh.; GENOV, L., inzh.

Results of measuring the parameters of lightning current. Elek.  
sta. 33 no.8:49-50 Ag '62. (MIRA 15:8)

1. Institut energetiki Bolgarskoy Akademii nauk.  
(Lightning)

LAZAROVSKI, St., inzh.

Jubilee session of the Scientific Research Institute of Electric  
Power Engineering, Committee of Electric Power Engineering and  
Fuel. Elektroenergiia 15 no. 7/8:50-51 J1-Ag '64.

LAZAROVSKI, Stefan, inzh.; GENOV, Liudmil

Studies on the coefficients of lightning currents. Izv Inst energ  
BAN 3:61-90 '62.

1. Chlen na Redaktsionnata kolegiia, "Izvestiia na Instituta  
po energetika" (for Lazarovski).

LAZAROVSKI, Stefan, inzh.; BOICHEV, Bozhidar, inzh.

Mechanization in the construction of the mean and low tension electric lines. Elektroenergiia 13 no.7:23-26-J1 '62.

LAZAROVSKI, Stefan, inzh.; BAKHIEV, Bakhni; NANOV, Dimitur;  
VLADKOV, Vladimir; PANAIOTOV, Panaiot

Protection of the 20 kv. system against lightning. Izv  
Inst energ BAN 1:155-241 '61.

1. Chlen na Redaktsionnata kolegiia, "Izvestiia na Instituta  
po energetika" (for Lazarovski).

LAZAROW, A.; SZAPAZON, M.; ALKSOMSKI, D.; LAZARENSKI, M.

Fetal injuries in cases of breech presentation. Ginek. Pol. 3-  
no.2:183-188 F '65

1. E Kliniki Poloznictwa i Chorob Kobięcych Wydziału Lekarskiego  
w Skopje, Jugosławia (Kierownik: prof. dr. med. A. Szamekoy).

LAZARSFELD, I.

Method of calculation power norms for manual electric arc welding. p. 377  
Vol 8, no. 10, Oct. 1955. MAG AR ENERGIAGAZDASAG, Budapest, Hungary.

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So: Eastern European Accession. Vol 5, no. 4, April 1956

LAZARSEFELD, I.

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HUNGARIAN ENERGY COMPANY.

TECHNOLOGY

Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

LAZARSPELD, I.

Charts for calculation of power norms. p.262. MAGYAR ENERGIAGAZDASAG.  
Budapest. Vol. 9, no. 7, July 1956.

SOURCE: East European Accessions List (EEAL), Library of Congress  
Vol. 5, No. 12, December 1956

LAZARSELD, I.

Instructions for use of the calculation chart for Kovacs (heating and heat treatment) furnaces. p.283. MAGYAR ENERGIAGAZDASAG. Budapest. Vol. 9, no. 7, July 1956.

SOURCE: East European Accessions List (EEAL), Library of Congress Vol.5, No. 12, December 1956

LILIANEID. 1.

A COMPUTATION TABLE FOR GAS GENERATION.

p 469 (MAGYAR ENERGIAGAZDASAG) BUDAPEST, HUNGARY VOL. 9 NO 11/12 NOV/DEC 1957

SC: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (AEEI) VOL. 6 NO 11 NOVEMBER 1957

BUDZANOWSKI, A.; GROTOWSKI, K.; JARCZYK, L.; LAZARSKA, B.; MICEK, S.;  
NIEWODNICZANSKI, H.; STRZALKOWSKI, A.; WROBEL, Z.

Energy dependence of the elastic scattering of alpha particles  
on  $^{40}\text{Ca}$  nuclei up to  $179^\circ$ . Inst fiz jadr report no.403:1-20  
'65.

1. Institute of Nuclear Physics, Krakow, and Institute of Physics  
of the Jagiellonian University, Krakow.

LAZARSKA, BARBARA

POLON

Correlation between the chemical composition and certain physiological properties of stallion semen. Barbara Lazaraska. *Roczniki Nauk Rolniczych* 68B: 405-73 (1954) (English summary).—Correlation was established between the concn. of spermatozoa in the semen and analytical values for P, N, Ca, moisture, ash, d., and vol. No correlation could be found between pH and physiol. properties of the semen. Alina S. Szczesniak

LAZARSKA, B

7161/ Copper and molybdenum metabolism in animals. R. Ryś and B. Lazarska (Roczn. Nauk rol., 1955, 70, 2, 1-8).—The effects of feeding Cu and Mo on the amounts of these elements in the blood are examined.  
A. G. POLLARD

2

DOMNICH, Antoni; JAGIELSKI, Aleksy; LITYNSKI, Tadeusz; LAZARSKA, Barbara;  
LAZARSKI, Roman

Contamination of Polish soils with strontium-90. Nukleonika 6 no. 2:135-138  
'61.

1. Wyzsza Szkola Rolnicza, Krakow, Katedra Chemii Rolnej i Katedra Fizyki.

DOMNICH, Antoni; JAGIELSKI, Aleksy; LITYNSKI, Tadeusz; LAZARSKA, Barbara;  
LAZARSKI, Roman

Contamination of Polish soils with strontium-90. Nukleonika 6 no. 2:135-136  
'61.

1. Wyższa Szkoła Rolnicza, Krakow, Katedra Chemii Rolnej i Katedra Fizyki.

JAGIELSKI, Aleksy; LAZARSKA, Barbara; LAZARSKI, Roman

Radiocontamination of Polish soils with strontium 90.  
Nukleonika 7 no.11:725-728 '62.

1. Wyzsza Szkola Rolnicza, Katedra Fizyki, Krakow.

JAGIELSKI, Aleksy; LAZARSKA, Barbara; LAZARSKI, Roman

Radiocontamination of Polish soils with strontium 90.  
Nukleonika 7 no.11:725-728 '62.

1. Wyższa Szkoła Rolnicza, Katedra Fizyki, Krakow.

SEMADENI, Irena; LAZARSKI, Stanislaw; WRONOWSKA, Barbara

Anatomy and topography of the submaxillary glands. (Casts).  
Czas. stomat. 18 no.8/9:1081-1084 Ag-S '65.

1. Z Kliniki Chirurgii Stomatologicznej Pomorskiej AM w  
Szczecinie (Kierownik: prof. dr. med. I. Semadeni).

LAZARYAN, A.

Regulate the manufacture of nonstandard equipment. Prom.Arm. 6  
no.2:13-15 F '63. (MIRA 16:5)

1. Upravleniye komplektatsii i oborudovaniya Soveta narodnogo  
khozyaystva Armyanskoy SSR.  
(Armenia---Industrial management)

MKHITARYAN, A.M.; PAKHCHANYAN, G.G.; LAZARYAN, A.G.

Efficiency of monolayer depressors of evaporation. Izv. AN Arm.  
SSR. Ser. fiz.-mat. nauk 18 no.6:50-70 '65. (MIRA 19:1)

LAZARYAN, B.A.

112-1-88

Translation from: Referativnyy Zhurnal, Elektrotehnika, 1957,  
Nr 1, p. 9 (USSR)

AUTHOR: Lazaryan, B.A.

TITLE: On the Problem of Electric Modeling of Transient Conditions  
of Rod Motion (K voprosu ob elektricheskoy modelirovani  
perekhodnykh rezhimov dvizheniya sterzhney)

PERIODICAL: Tr. Dnepropetr. in-ta, inzh. zh.-d. transp., 1956, Nr 25  
pp. 84-123

ABSTRACT: On the basis of the similarity observed between the  
differential equations of longitudinal and torsional  
oscillations of elastically- tensile rods

$$\frac{\partial^2 u}{\partial t^2} = a^2 \left( 1 + \mu \frac{\partial}{\partial t} \right) \frac{\partial^2 u}{\partial x^2} - 2\delta \frac{\partial u}{\partial t},$$

Card 1/3

$$\frac{\partial^2 \varphi}{\partial t^2} = a^{*2} \left( 1 + \mu^* \frac{\partial}{\partial t} \right) \frac{\partial^2 \varphi}{\partial x^2} - 2\delta^* \frac{\partial \varphi}{\partial t},$$

112-1-88

On the Problem of Electric Modeling of Transient Conditions of Rod (Cont.)

on the one hand, and the differential equation of the

$$\frac{\partial^2 v}{\partial t^2} = \frac{1}{LC} \left( 1 + RC \frac{\partial}{\partial t} \right) \frac{\partial^2 v}{\partial x^2} - \frac{\gamma}{L} \cdot \frac{\partial v}{\partial t},$$

voltage change in an electrical line, containing longitudinal  $r$ ,  $L$  and transverse  $R, C$ , (each pair in series connection), on the other, the stresses occurring in rod cross sections in transient conditions are investigated. In the theoretical analysis, a method of generalized coordinates and Lagrange equations is applied to a rod divided into a finite number of sections corresponding to the number of circuits in the modeling circuit. Two methods of modeling are submitted. The first utilizes the equality of the energy leakage coefficients, the second uses the equality of the attenuation factors of the first oscillation tones of the modeling and the modeled systems.

Card 2/3

112-1-88

On the Problem of Electric Modeling of Transient Conditions of Rod (Cont.)

A description of a model in the form of an electric circuit consisting of 35 circuits is presented. The electric modeling of boundary conditions of the mechanical problem is discussed in detail. The investigation of the local tensions in rods in transient conditions reduces to the reading of the voltage oscillograms at the model's input. For illustration, examples of modeling stresses in rods with different attenuation and hysteresis are presented. From these examples, it can be seen that the results of modeling agree well with those of analytical calculation. Bibliography: 8 titles.

P.M.Ch.

Card 3/3

LAZARYAN, B. M.

26547 I kodzhaeva, V. P. K materialam po uluchsheniyu sushchestvuyushchego assortimenta vinograda v azerbaydzhanskoy SSR. Trudy azerbaydzh. Nauch-Issled. In-ta mnogolet. nasazhdeniy, T. I., 1949, c. 102-07 - Bibliogr: 5 nazv

SO: LETOFIS' NO. 35, 1949

LAZARYAN, Eduard Lazarevich; KOGAN, A.S., kand.tekhn.nauk, red.; AKATOVA,  
V.G., red.izd-va; SALAZKOV, N.P., tekhn.red.

[Water intakes] Vodopriemniki. Pod obshchey red. A.S.Kogana.  
Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1960. 181 p.

(MIRA 13:9)

(Water-supply engineering)

LAZARYAN, I.L.

Knife wound of the heart. Vest.khir.75 no.6:114 J1 '55.(MLRA 8:10)

1. Iz Libavskoy zhel.-dor.bol'nitsy. Liepaja, Latviyskoy SSR,  
zhel.-dor.bol'nitsa.

(HEART--WOUNDS AND INJURIES)

*L. T. Z. K. Y. M. No. 2.*

~~LAZARIAN, B.~~; OTOCHEVA, M.A., red.; PETROVSKAYA, Ye.S., tekhn.red.

[Sewerage outlets] Kanalizatsionnye vypuski. Moskva, Izd-vo M-va  
kommunal'nogo khoz. RSFSR, 1957. 170 p. (MIRA 11:3)  
(Sewerage)

L 16751-63

EWI(d)/EWI(1)/FCC(w)/BDS AFFTC/IJP(C)

S/124/63/000/004/047/064

55

AUTHOR: Konashenko, S. I.; Lazaryan, V. A.

TITLE: A study of oscillations in columnar systems with concentrated masses; with the application of Lagrangian equations of the second type

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1963, 20, abstract 4V150 (Stroit. mekhan. i raschet sooruzh., no. 4, 1962, 31-36.)

TEXT: The author adduces a number of examples to show a method of compiling the differential equations of curved oscillations in columnar systems with finite number of degrees of freedom, with the use of Lagrangian equations of the second type. Determining the quasi-elastic coefficients in the expression for potential energy reduces to determining the unit displacements of the corresponding partial systems. The author shows that in many cases this computation is conveniently conducted with the help of moment focus ratios, or tables of reactive forces of the displacement method. In studying the oscillations of complex systems (frame with large number of linear shifts, closed contour frame, beams lying on elastic supports in some situations), the problem is mathematically complicated in that along with the system of differential equations there arises another system of algebraic equations conditioned by supplemental links imposed on the mechanical system by the methodology in

Card 1/2

L 16751-63

S/124/63/000/004/047/064

A study of .....

question. On the example of the oscillations of a solid beam bearing two concentrated loads, the author points out a scheme for solving the problem with the use of continuous-action computers. A. I. Osedel'ko,

[Abstracter's note: Complete translation.]

Card 2/2

LAZARYAN, V.A., doktor tekhn. nauk, prof.; VOSKOBOYNIK, E.Z., kand.  
tekhn. nauk; GARKAVI, Ya.N., kand. tekhn. nauk

Technological and working stresses in the frame of the FD  
locomotive. Trudy DIIT no.24:5-17 '54. (MIRA 16:11)

LAZARYAN, V. A.

42555. Vliyaniye Pervonachal'nogo szhatiya Poyezda na usiliya v upryazhnykh apparatakh. Shornik trudov DIIT'a (Dnepropetr. in-t inzh. zh.-d. Transportaim. Kaganovicha), vyp. 16, 1947, c. 3-20

LAZARYAN, V. A.

42222. LAZARYAN, V. A. O metode cox'a, Sbornik trudov DIIT'a (Dnepropetr. In-t inzh. zh.-d transporta im. kaganovicha), vyp. 16, 1947, c.83-87.

So: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948.

LAZARYAN, V. A.

Lazaryan, V. A. - "On dynamic stresses in the coupling gear of passenger trains",  
Trudy Dnepropetr. in-ta inzhenerov zh.-d. transporta, Issue 18, 1942, p. 3-90, -  
Bibliog: 26 items.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8, 1949).

LAZARYAN, V. A.

Lazaryan, V. A. - "On recording forces of short duration with a registering instrument of a dynamometer on Car No. 42 St. ", Trudy Dnepropetr. in-ta inzhenerov zh.-d. transporta, Issue 18, 1948, p. 91-100.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statoy, No. 8, 1949).

LAZARYAN, V. A.

USSR/Engineering—Locomotive construction

Card 1/1 : Pub. 128—4/33

Authors : Lazaryan, V. A., Prof., Cand. Tech. Sci.; Voskoboynik, E. Z., Docent,  
Cand. Tech. Sci.; and Garkavi, Ya. N., Docent, Cand. Tech. Sci.

Title : Temperature strains on the frame of the FD locomotive

Periodical : Vest. mash. 34/8, 22-24, Aug 1954

Abstract : Cracks which form in the frame of the FD locomotive are studied. The boiler is found to increase its length under the effect of superheated steam. Changes also take place in the dimensions of the cylinders. Data are compiled and formulas developed for calculating the nature and location of the strains. Graphs; drawings; tables.

Institution : .....

Submitted : .....

LAZARYAN, V.A.

Investigating coupling-gear stresses produced during the  
starting of freight trains. Prykl. mekh. 2 no.1:16-28  
'56.

(MLRA 10:2)

1. Dnipropetrovs'kiy institut inzheneriv transportu.  
(Strains and stresses) (Car couplings)

LAZAR V. A.

124-11-13179

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr. 11, p. 131 (USSR)

AUTHOR: Lazaryan, V. A.

TITLE: Investigation of the Stresses Arising During Transitional Regimes of Motion in Bars with Different Elastic Imperfections. (Issledovaniye usiliy, voznikayushchikh pri perekhodnykh rezhimakh dvizheniya, v sterzhnyakh s razlichnymi uprugimi nesovershenstvami)

PERIODICAL: Tr. Dnepropetr. in-ta inzh. zh.-d. transp., 1956, Nr. 25, pp. 5-50

ABSTRACT: Results are shown of an investigation of stresses in a bar during longitudinal vibrations, when the material of the bar is subjected to internal friction. The Author assumes two simple cases of imperfectly elastic material: 1) when the material offers a viscous resistance and the relationship between the stress and the deformation  $\epsilon$  assumes the form

$$\sigma = E\epsilon + E\mu \frac{d\epsilon}{dt}$$

and 2) when the material has a clearly defined hysteresis characteristic.

Card 1/2

Investigated in detail are two cases, whereupon the A. arrives at the conclusion that the stresses for different time and location points

Card 2/2

SOV/124-57-3-3475

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 122 (USSR)

AUTHOR: Lazaryan, V. A.

TITLE: On the Problem of Electrical Analog Simulation of Shaft Motion During Transitional Regimes (K voprosu ob elektricheskoy modelirovani perekhodnykh rezhimov dvizheniya sterzhney)

PERIODICAL: Tr. Dnepropetr. in-ta inzh. zh.-d. transp., 1956, Nr 25, pp 84-123

ABSTRACT: Longitudinal and torsional oscillations of shafts are studied by means of the method of electrical simulation analogs by using an electrical network composed of circuits with concentrated constants. Different methods of analog simulation are investigated for visco-elastic systems as well as for systems with resistances proportional to the cross-sectional velocities. Results are given for experimental analog simulation of shaft motion during transitional regimes on a model consisting of 35 circuits.

G. V. Savinov

Card 1/1

LAZARYAN, V.A., doktor tekhnicheskikh nauk, professor.

Dynamic forces arising in coupling devices in starting extended  
freight trains. Trudy DIIT no.25:124-151 '56. (MIRA 10:1)  
(Car couplings) (Dynamics)

~~LAZARYAN, V.A.~~, professor, doktor tekhnicheskikh nauk; KOROTKEYEV, I.M.,  
kandidat tekhnicheskikh nauk; L'VOV, A.A., kandidat tekhnicheskikh  
nauk.

Improving the utilization of flat-car and gondola-car load  
capacity. Zhel. dor. transp. 38 no.11:67-69 N '56. (MLRA 9:12)

(Railroads--Cars)

LAZARYAN, V.A., doktor tekhn.nauk, prof.

Natural oscillation of freight-car trucks. Vest. TSNii MPY 17 no.2:  
7-12 Mr '58. (MIRA 11:4)

(Railroads--Freight cars)

LAZARYAN, V.A. (Dnepropetrovsk)

Natural vibrations of locomotives. Prykl.mekh. 6 no.1:31-39  
'60. (MIRA 13:6)

1. Dnepropetrovskiy institut inzhenerov transporta.  
(Locomotives---Vibrations)

LAZARYAN, V.A., prof.; FRISHMAN, M.A.; L'VOV, A.A., kand.tekhn.nauk;  
LIPOVSKIY, R.S., inzh.; BERMAN, Z.G., inzh.; LEVANKOV, I.S., inzh.

Wheel and rail interaction forces caused by short-distance unevenness  
of the track. Vest.TSNII MPS 19 no.6:9-12 '60. (MIRA 13:9)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo  
transporta.

(Railroads--Rails)

(Car wheels)

LAZARUKH, V.A. (Dnepropetrovsk); BLONKIN, Ye.P. [Blok'in, Ye.P.]  
(Dnepropetrovsk)

Natural longitudinal vibrations of systems consisting of three  
solid bodies and two strained rods. Prikl. mekh. 7 no. 1:1-  
66 '61, (NIA 14:2)

1. Dnepropetrovskiy institut inzhenerov transporta.  
(Elastic solids--Vibration)

LAZARYAN, V.A. (Dnepropetrovsk); BLOKHIN, Ye.P. [Blokhin, I.E.P.]  
(Dnepropetrovsk)

Transient conditions in the motion of systems consisting of three  
rigid bodies and two elastic rods. Prykl.mekh. 7 no.5:477-482  
'61. (MIRA 14:10)

1. Dnepropetrovskiy institut inzhenerov transporta.  
(Mechanical movements)

LAZARYAN, V.A., doktor tekhn.nauk, prof.; BARBAS, I.G., inzh.

Performance of automatic control systems under transient conditions of  
train movements. Vest.TSNII MPS 21 no.4:3-6 '62. (MIRA 15:6)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo  
transporta.  
(Railroads--Automatic train control)

ISAYEV, Igor' Petrovich; MOLODIKOV, Vasilii Aleksandrovich; BIRYUKOV, Ivan Vyacheslavovich; ~~LAZARYAN, V.A.~~, doktor tekhn. nauk, retsenzent; PEROVA, A.A., kand. tekhn. nauk, red.; VOROB'YEVA, L.V., tekhn. red.

[Fundamentals of programming and solving of traction and dynamics problems of the rolling stock of electric railroads by means of electronic computers] Osnovy programmirovaniia i reshenie zadach tiagi i dinamiki elektropodvizhnogo sostava na elektronnykh vychislitel'nykh mashinakh. Moskva, Transzheldorizdat, 1962. 185 p. (MIRA 15:10)  
(Electric railroads—Management) (Electronic computers)

KONASHENKO, S.I.; LAZARYAN, V.A. (Dnepropetrovsk)

Study of the vibrations of rod systems with concentrated masses  
using second-order Lagrange equations. Stroi.mekh.i rasch.soor.  
4 no.4:31-36 '62. (MIRA 15:8)  
(Elastic rods and wires)

LAZARYAN, Vsevolod Arutyunovich; ISAYEV, I.P., doktor tekhn.nauk,  
retsenzent; PEROVA, A.A., kand. tekhn. nauk, red.; BOBROVA,  
Ye.N., tekhn. red.

[Use of mathematical machines with continuous action in solving  
problems of the dynamics of railroad rolling stock]Primenenie ma-  
tematicheskikh mashin nepreryvnogo deistviia k resheniiu zadach  
dinamiki podvizhnogo sostava zheleznykh dorog. Moskva, Trans-  
zheldorizdat, 1963. 217 p. (MIRA 16:2)

(Electronic analog computers)  
(Railroad engineering)

LAZARYAN, V.A., doktor tekhn. nauk; BARBAS, I.G., inzh.;  
KABLUKOV, V.A., inzh.; MANASHKIN, L.A., inzh.

Use of electronic analog computers for solving problems on  
train starting. Vest. TSNII MPS 22 no.3:51-53 '63.  
(MIRA 16:7)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo  
transporta.

(Railroads---Trains---Mathematical models)

VERIGO, M.F., doktor tekhn. nauk; LAZARYAN, V.A., doktor tekhn. nauk;  
GRACHEVA, L.O., kand. tekhn. nauk; L'VOV, A.A., kand. tekhn. nauk;  
ANISIMOV, P.S., inzh.

Dynamic qualities of eight-axle gondola cars and their action  
on the track. Vest. TSNII MPS 22 no.7:3-9 '63. (MIRA 16:12)

KRYUKOV, B.I.; LAZARYAN, V.A.; LESKEVICH, V.I.; RYKHAL'SKY, YU.A. (Dnepropetrovsk)

"Dynamic problems of vibrating machines".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

BATRAK, Ye.T.; BUBINA, N.G.; GORELOVA, T.N.; KORDIN, Yu.A.; KRYUKOV, B.I.;  
KUKUSHKINA, I.N.; LAZARYAN, V.A.; POLYAKOVA, Zh.D.; SHABARSHOVA, A.V.  
(Dnepropetrovsk)

"Study of regular displacement behaviours of bulk material over vibrating  
rough surface realizing given motion"

report presented at the 2nd All-Union Congress on Theoretical and Applied  
Mechanics, Moscow, 29 January - 5 February 1964

NIKOL'SKIY, L.N., doktor tekhn. nauk, prof.; LAZARYAN, V.A.,  
doktor tekhn. nauk, prof., retsenzent; SARANTSEV, Yu.S.,  
inzh., red.

[Friction shock absorbers; their design and construction] Friksionnye amortizatory udara; raschet i  
konstruirovaniye. Moskva, Mashinostroenie, 1964. 170 p.  
(MIRA 17:12)

LAZARYAN, Vsevolod Arutyunovich; SARANTSEV, Yu.S., red.

[Dynamics of railroad cars; stability of motion and  
vibrations] Dinamika vagonov; ustoichivost' dvizheniia  
i kolebaniia. Moskva, Izd-vo "Transport," 1964. 254 p.  
(MIRA 17:6)

ACCESSION NR: AP4043298

8/0198/64/010/004/0349/0359

AUTHOR: Lazaryan, V. A. (Dnipropetrovs'k); Manashkin, L.A. (Dnipropetrovs'k)

TITLE: Shock absorber

SOURCE: Prykladna mekhanika, v. 10, no. 4, 1964, 349-359

TOPIC TAGS: shock absorber, damper, electronic modeling, oscillation period

ABSTRACT: The work of a shock absorber with damper resistance forces, depending on the compression rate of the shock absorber and proportional to the elastic resistance forces, has been analyzed. Inasmuch as the mass of the shock absorber as compared with the mass of colliding solids is small, the elastic shock of shock absorber elements is disregarded. Functions  $\psi(q)$  and  $\varphi(v)$ , describing the dependence of elastic and nonelastic resistance forces of the shock absorber on displacement  $q$  and speed  $v$ , are assumed to be odd. Formulas for determining the highest compression  $q_1$  of the shock absorber during the shock and for determining the velocity  $v_1$  at the conclusion of the shock are derived, along with equations for calculating the amplitudes of relative displacements and velocities during oscillation in case automatic engagement occurs during the shock and for

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ACCESSION NR: AP4043298

estimating the oscillation periods. Equations are introduced which permit determination of displacement values  $q_0$  and velocity values  $v_0$  at which the shock absorber suffers the highest stress  $S$ . the rate of change of stress during the shock has also been investigated. The expression  $\dot{\psi}(v) = P_n v^{n-1} \text{sign } v$  at  $n = 0, 1, 2$ , and  $\geq 3$  and the expression  $\psi(q) = k_m |q|^m \text{sign } q$  are considered in great detail. The analytic calculation results have been compared with those obtained by electronic modeling assuming linear dependence of the elastic force on the relative displacement (where  $m = 1$ ). The experiments carried out on the electronic models are in good agreement with the results obtained by analysis. Orig. art. has: 5 figures, 46 formulas, and 1 table.

ASSOCIATION: Dnipropetrovs'kyi instytut inzheneriv transportu (Dnepropetrovsk Institute of Transportation Engineers)

SUBMITTED: 17Jan64

ENCL: 00

OTHER: 002

NO REF SOV: 002

SUB CODE: ME, MA

Card 2/2

LAZARYAN, V.A. (Dnepropetrovsk); MANASHKIN, L.M. (Dnepropetrovsk)

Damping an impact. TrybL. tekhn. 10 no.4:349-359 '64.  
(MIRA 17:10)

1. Dnepropetrovskiy institut inzhenerov transporta.

LAZARYAN, V.A., doktor tekhn. nauk, prof.; MANASHKIN, L.A., inzh.

Use of electronic models in the analysis of car impacts. Vest.  
TSNII MPS 23 no.7:61-64 '64. (MIRA 18:3)

1. Dnepropetrovskiy institut inzhenerov zheleznodorozhnogo  
transporta.

LAZARYAN, V. M.

26548 Gukasov, A. I. I. Bystraya, M. F. iskusstvennoye opyleniye vinograda sorta tabkberi. Trudy azerbaydzh. Nauch-Issled. In-ta mnogolet. nasazhdeniy, T. I., 1949, c. 108-15 - Bibliogr: 9 nazv.

SO: LETOPIS' NO. 35, 1949

82844

S/081/60/000/008/001/001  
A006/A001

15.9220

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 8, p. 544, # 33151

AUTHORS: Tsaylingol'd, V.L., Farberov, M.I., Epshteyn, V.G., Lazaryants,  
E.G., Boguslavskiy, D.B., Bugrova, G.A., Uzina, R.V. ✓

TITLE: Vinyl-Pyridine Rubbers and Latexes and Outlooks on Their Use

PERIODICAL: Yaroslavl, prom-st' (Sovnarkhoz Yaroslavl, ekon. adm. r-na),  
1958, No. 5, pp. 22-25

TEXT: Copolymers of butadiene and 2-methyl-5-vinyl pyridine (VPK) were obtained at 50 and 5°C polymerization temperature and studied. Resistance to wear and heat generation of VPK-vulcanized rubbers exceeds considerably that of vulcanized products from butadiene-styrene rubbers (SKS). Rubbers containing 10-15% 2-methyl-5-vinyl-pyridine have high quality characteristics. Impregnation of cords with VPK latexes ensures high adhesion strength of viscose and caprone cords with natural, SKB and SKS rubbers. Compared to standard SKS impregnation, VPK impregnation increases the adhesion strength of rubber and

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82844

S/081/60/000/008/001/001

A006/A001

Vinyl-Pyridine Rubbers and Latexes and Outlooks on Their Use

cord by a factor of 1.5-2 under static conditions and much more under dynamic conditions. VPK, polymerized at 5°C exceeds the quality of analogous polymers obtained at 50°C.

O.T.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

AUTHORS: Tsaylingol'da, V. L.; Fashkov, L. B.; Boshkova, V. G.;  
~~Lazarvants, M. G. and Boguslavskiy, E. A.~~ SOV/138-88-9.1/11

TITLE: Low-Temperature Copolymers of 1,3-Butadiene with 2-Methyl-4-Vinylpyridine in Ordinary Rubbers (Preliminary Communication) (Nizkotemperaturnyye sopolimery butadiyena-1,3 s 2-metil-5-vinilpiridinom v kachestve kauchukov obshchego naznacheniya)

PERIODICAL: Kauchuk i Rezina, 1988, Nr 9, pp 1 - 4 (USSR)

ABSTRACT: Latexes based on these copolymers show better properties when used in the production of tyre cords (Ref.1) During investigations of these copolymers, and of some of their properties, the copolymers contained varying amounts of monomers; the polymerisation temperatures were 50° and 5°C. Low temperature polymerisation conditions were based on the oxidation-reduction system suggested by Dolgoplosk (Ref.4). The substance for use during polymerisation at 50°C was based on the composition given for rubber SKS-30. A 70% conversion of the monomers was attained after 10 - 12 hours. The untreated monomers were distilled off after termination of the polymerisation and 3.5% of an aqueous dispersion of "Neczon "D" introduced into the latex. The latex coagulated, and the rubber was dried to 105°C. The composition

Card 1/3

Low-Temperature Copolymers of 1,3-Butadiene with 2-Methyl-5-vinylpyridine in Ordinary Rubbers SOV/138-58-9.1/11

of two mixtures is given. These mixtures were vulcanised at 143°C and tested according to GOST 8074-51 (Ref.5). The physico-mechanical properties of rubbers obtained by hot and cold polymerisation are given in Tables 1 and 2. The characteristics of these copolymers and of styrene copolymers SKS-30 and SKS-30A were compared. The properties of both types of copolymers depend on the content of 2-methyl-5-vinylpyridine (Fig.1). Fig.2: the wear resistance of cold and hot copolymers when containing 10 - 15% 2-methyl-5-vinylpyridine. Data on the loss of plasticity during boiling in H<sub>2</sub>O (at 100°C for 30 minutes) is given in Table 3. Copolymers of butadiene with 2-methyl-5-vinylpyridine show a 1.5 - 2-fold better wear resistance than butadiene-styrene rubber vulcanisates. There are 2 Figures, 3 Tables and

Card 2/3

Low-Temperature Copolymers of 1,3-Butadiene with 2-Methyl-5-Vinyl-  
pyridine in Ordinary Rubbers

SOV/138-58-9-1/11

5 References: 3 English and 2 Soviet.

ASSOCIATION: Yaroslavskiy tekhnologicheskii institut i Yaroslavskiy  
shinnyy zavod (Yaroslavl' Technical Institute and the  
Yaroslavl' Tyre Factory)

Card 3/3

36363  
S/081/62/000/005/106/112  
B167/B101

15.9201  
AUTHORS:

Kopylov, Ye. P., Yemel'yanov, D. P., Lazaryants, E. G.  
Rumyantseva, A. N., Tsaylingol'd, V. L., Epshteyn, V. G.

TITLE:

Peculiarities of vulcanizates based on methylvinylpyridine  
rubber hydrochlorides

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 5, 1962, 644-645,  
abstract 5P298 (Uch. zap. Yaroslavsk. tekhnol. in-ta, v. 6,  
1961, 157 - 162)

TEXT: A study of the co-polymers of butadiene and 2-methyl-5-vinylpyridine  
in the ratio 85:15 (CKM6П-15A)(SKMVP-15A) and also in combination with  
styrene in the ratio 85:5:25 (CKC-25-M6П-5A)(SKS-25-MVP-5A) was made. The  
crumbled vulcanized rubber was immersed in HCl solution (density 1.19) for  
1, 2, 4, 12, and 24 hrs, washed with water, and dried 4-5 hrs at 55-60°C.  
A maximum of 4.3% and ~1% of HCl combines with SKMVP-15A and SKS-25-MVP-5A,  
respectively, corresponding to one HCl molecule per methylvinylpyridine  
radical. Mixtures of these polymers are more tacky and show less scorching  
than mixtures of the original rubbers. On increasing the content of com-  
bined HCl the plasticity of the mixtures decreases, but that of the black-  
Card 1/2

Peculiarities of vulcanizates...

S/081/62/000/005/106/112  
B167/B101

filled materials based on the SKS-25-MVP-5A salt remains unchanged. The resistance towards rupture of the unfilled and the slightly filled vulcanizates increases with the amount of combined HCl, and reaches 234 kg/cm<sup>2</sup> with an unfilled SKMVP-15A vulcanizate. The tear resistance of unfilled vulcanizates increases with combined HCl content, but their relative extension is little affected. The hardness and heat evolution of the vulcanizates increases, their elasticity drops appreciably (SKMVP-15A) or slightly (SKS-25-MVP-5A); the heat evolution of the latter vulcanizates does not increase; higher combined HCl content also increases the attrition resistance of the black-filled vulcanizates, SKS-25-MVP-5A in particular. The added HCl has no apparent effect on the frost resistance, and increases the adhesive power to metals and the resistance to swelling in gasoline and benzene of SKMVP-15A rubbers. [Abstracter's note: Complete translation.]


Card 2/2

S/138/62/000/010/002/008  
A051/A126

AUTHORS: Kopylov, Ye.P., Epshteyn, V.G., Lazaryants, E.G., Tsaylingol'd, V.L.  
TITLE: Production of highly-resistant vulcanizates based on complex compounds of methylvinylpyridine rubbers and metal salts

PERIODICAL: Kauchuk i rezina, no. 10, 1962, 19 - 26

TEXT: The authors discuss the production of copolymers containing active functional groups in the molecular chains: carboxylic, pyridine, aldehyde, etc. The vulcanizates produced from these copolymers have new properties, characteristic of the products from reaction of functional groups with other components of the rubber mix. Reference is made to previous studies on this subject and to work conducted by the authors on the features of complex compounds of CKMBN (SKMVP) and the salts of methylvinylpyridine rubbers and acids. The reaction of SKMVP complex-formation is noted only with salts that form complex formations with the individual pyridine and its homologues. The properties of the produced vulcanizates are explained only by the presence of an inherent special vulcanizing structure - that of coordinated transverse bonds. The high tear-resistance



Card 1/2

Production of highly-resistant vulcanizates ....

S/138/62/000/010/002/008  
A051/A126

noted in non-filled vulcanizates with coordinated bonds is determined by the mobility of the transverse bonds in the polymer complexes. Experimental data showed that the highest tensile properties of the rubbers are reached when zinc chloride is used with the simultaneous introduction of magnesium chloride and zinc oxide into the rubber. It is concluded that functional groups of methylvinylpyridine rubbers form complex compounds with certain metal halogenides and salts with acids. The non-filled and the carbon-black vulcanizates with coordinated bonds have high tensile properties, including a high wear-resistance. The elevated tensile strength in the presence of coordinated bonds in the vulcanizates is explained by the mobility of these bonds and the ability of them to re-group during deformation. There are 6 figures and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka i Yaroslavskiy tekhnologicheskii institut (Scientific Research Institute of Monomers for Synthetic Rubber and Yaroslavl' Institute of Technology)

Card 2/2

L 18163-63

ACCESSION NR: AP3004250

S/0138/63/000/007/0001/0003

AUTHORS: Al'bam, M. A.; Pisarenko, A. P.; Lazaryants, E. G.

TITLE: High-styrene rubber for nonshrinking microporous vulcanizates 45

SOURCE: Kauchuk i rezina, no. 7, 1963, 1-3

TOPIC TAGS: polymerization, copolymer, vulcanized rubber, shrinkage, polystyrene

ABSTRACT: The objective of the present work was the improvement of microporous rubber produced at the Kuyby\*shevskiy zavod SK (Kuyby\*shev Plant SK) for shoe soles. This rubber shrank excessively unless subjected to heat treatment. It was decided to replace the polystyrene component of the earlier microporous rubber by a copolymeric resin containing 85%, 90%, and 95% polystyrene. The vitrification temperature was found to increase with the percentage increase of polystyrene in the resin. A pilot plant batch of synthetic rubber with 95% polystyrene resin, calculated to contain 50% polystyrene, gave within 30 days only a 0.73% shrinkage, as against 4.64% for synthetic rubber as such. It was also observed that the use of a polymerization regulator (such as diperoxide) during the polymerization process had a detrimental effect on the shrinkage of the rubber. The extent of polystyrene polymerization as well as the temperature under

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ACCESSION NR: AP3004250

which the process was conducted also affect the shrinkage, 100% for the former and 5C for the latter being optimal. I. P. Aladinskaya, S. A. Volkova, V. G. Dyunina, (VNIPIK), V. A. Gromova, L. V. Kosmodem'yanskiy, E. P. Kopylov, A. P. Rokhmistrova, and Ye.N. Shushkina, (NIIMSK) participated in the work. Orig. art. has: 2 charts and 2 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi i nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka (All-Union Scientific Research Institute of Sheet Materials and Artificial Leather. Scientific Research Institute of Monomers for Synthetic Rubber)

SUBMITTED: 00

DATE ACQ: 21Aug63

ENCL: 00

SUB CODE: MA

NO REF SOV: 001

OTHER: 000

Card 2/2

L 18074-63

RM/WW/MAY

ACCESSION NR: AP3004252

EPR/EWP(j)/EPF(c)/EWT(m)/EDS

AFTTC/ASD/ESD-3

Ps-4/Pc-4/Pr-4

s/0138/63/000/007/0009/0013

81  
79

AUTHORS: Kopylov, Ye. P.; Epshteyn, V. G.; Lazaryants, E. G.; Tsylingol'd, V. L.;  
Mantseva, L. N.

TITLE: Properties of vulcanizates of methylvinylpyridine rubbers with coordination bonds

SOURCE: Kauchuk i rezina, no. 7, 1963, 9-13

TOPIC TAGS: vulcanizate, functional group, complex compound, reinforcing filler, carbon black, coordination bond, complex forming agent, organic acid

ABSTRACT: Tests are reported on vulcanizates from rubbers with coordination bonds formed by a reaction of methylvinylpyridine rubber (MVPR) with the chlorides of zinc, cadmium, and tin, or zinc oxide. The plasticity of vulcanized rubber containing up to 50% carbon black showed a marked linear decrease when up to 5% zinc chloride was included in the formula, but its tensile strength, resistance to abrasion, and its modulus at 300% elongation went up. Similar observations were made with additions of tin chloride and cadmium chloride, as well as Fillblack O or calcium carbonate. It was concluded that incorporation into MVPR of zinc chloride and the like resulted in formation of specific coordination bonds, substan-

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ACCESSION NR: AP3004252

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tiated by the fact that vulvanized rubbers of equal tensile strength were prepared from MVPR stock containing either 50% carbon black or 40% carbon black plus 1% zinc chloride. The investigation also covered the effect of metacrylic and benzoic acids on the properties of unfilled vulcanized rubbers obtained by polymerization of MVPR in the presence of 10% zinc chloride. The addition of 10% of one of these acids produced a transparent rubber possessing a triple tensile strength (as compared with the control) without affecting its plasticity. Orig. art. has: 4 charts and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut monomerov dlya SK, Yaroslavskiy tekhnologicheskii institut (Scientific Research Institute of Monomers for Synthetic Rubber, Yaroslavl' Technical Institute)

SUBMITTED: 00

DATE ACQ: 21Aug63

ENCL: 00

SUB CODE: MA

NO REF SOV: 005

OTHER: 001

Card 2/2

LAZARYANTS, E.G.; TSAYLINGOL'D, V.L.; SMIRNOV, Yu.V.; SHIKHALOVA, K.P.;  
OLADOV, B.N.

Dewatering of synthetic rubbers in screw expeller presses. Kauch.  
i rez. 22 no.5:13-16 My '63. (MIRA 16:7)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo  
kauchuka.

(Rubber, Synthetic--Drying)

AL'BAM, M.A.; PISARENKO, A.P.; LAZARYANTS, E.G.; Prinimali uchastiye:  
ALADINSKAYA, I.P.; VOLKOVA, S.A.; DYUNINA, V.G.; GROMOVA, V.A.;  
KOSMODEM'YANSKIY, L.V.; KOPYLOV, Ye.P.; ROKHMISTROVA, A.P.;  
SHUSHKINA, Ye.N.

High-styrene rubber mixtures for the manufacture of microporous  
non-shrinking rubbers. Kauch. i rez. 22 no.7:1-3 J1 '63.  
(MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh  
materialov i iskusstvennoy kozhi i Nauchno-issledovatel'skiy  
institut monomerov dlya sinteticheskogo kauchuka.  
(Rubber, Synthetic)

KOSMODEM'YANSKIY, L.V.; SHUSHKINA, Ye.N.; KOPYLOV, Ye.P.; KOVRAYSKAYA, N.  
L.; LAZARYANTS, E.G.; FARBEROV, M.I.

Use of a synthetic emulsifier with a base of di-tert-butylbenzoic  
acid for the synthesis of all-purpose rubbers. Kauch. i rez. 22 no.  
11:11-14 N '63. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo  
kauchuka i Yaroslavskiy tekhnologicheskii institut.

ACCESSION NR: AP4042337

S/0138/64/000/007/0007/0010

AUTHOR: Rumyantseva, Z. M., Golitsina, A. A., Farberov, M. A., Epshteyn, V. G., Lazaryants, E. G., Yemel'yanov, D. P., Kosmodem'yanskiy, L. V.

TITLE: Synthesis and use of butadiene methacrolein latexes

SOURCE: Kauchuk i rezina, <sup>23</sup>no. 7, 1964, 7-10

TOPIC TAGS: tire manufacture, tire cord saturation compound, saturated cord bond strength, latex containing saturation compound, latex SKMA-3, butadiene methacrolein latex, aldehyde group content, polymerization process, latex synthesis, rubber SKS-30 AM, rubber NK, synthetic rubber, SBR rubber

ABSTRACT: Latexes were synthesized by copolymerization of butadiene and methacrolein at 5C in acid (pH 2.5-3.0) and alkaline (pH 10.0-10.5) media, with methacrolein in the initial emulsion varying from 1 to 30 parts by weight (recipes given). Conversion levels of 70% were attained and the kinetics of the process are described in detail. Compounds of the synthesized latexes with resorcinol-formaldehyde (RF) or glycol-resorcinol formaldehyde (FR-12) resins (12 parts by weight of resin per 100 parts of polymer) were used to saturate tire cords. The cords were then tested by multiple deformation, static peeling and N methods for the strength of their bond to resins from NK, SKB and SKS-30

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ACCESSION NR: AP4042337

AM rubbers. It was found that bond strength depends on the content of aldehyde groups in the latex and was best for a monomer mixture with 20% methacrolein by weight. Polymerization at 5C, a conversion level of 70%, Defo hardness levels of 1500 to 3000 g and the use of a rosin soap as an emulsifier promoted bond strength. Comparative evaluation of the synthesized latex, named SKMA-3, indicated it to be superior in bond strength over compounds based on carboxyl containing and vinyl pyridine latexes. Orig. art. has: 4 tables and 2 graphs.

ASSOCIATION: Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka (Scientific Research Institute for Synthetic Rubber Monomers); Yaroslavskiy tekhnologicheskii institut (Yaroslav Technological Institute); Yaroslavskiy shinny\*y zavod (Yaroslav Tire Factory)

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 010

OTHER: 003

Card 2/2

L 40306-65 EWT(m)/EPF(c)/EMP(j)/T Pc-4/Pr-4 RM  
 ACCESSION NR: AP5008378

S/0190/65/007/003/0523/0530

AUTHORS: Kopylov, Ye. P.; Lazaryants, E. G.; Epshteyn, V. G.

TITLE: Nature of the intermolecular bonds arising in the structuration of carboxyl-bearing rubber by monobasic amines and univalent and divalent metals

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 3, 1965, 523-530

TOPIC TAGS: intermolecular bond, crosslinked copolymer, rubber, amine, vulcanization, methacrylic acid, styrene, vinyl

ABSTRACT: The authors used as a base the triple copolymers of divinyl, styrene, and methacrylic acid containing 1.25% combined methacrylic acid. The amines were mixed with rubber at 30-40C. Ammonia was introduced in an aqueous solution with subsequent drying in a vacuum at 60-80C. The mechanical properties were then measured. It was found that strong bases among monobasic amines (piperidine, ethylamine, ammonia) cause structuration of rubber. Weaker bases (aniline, methylethylpyridine) plasticize the rubber effectively. The structuration observed is due to the formation of strong hydrogen bonds between the carboxyl groups of the different rubber molecules. These bonds are strengthened by ion-dipole interaction in the carboxyl-amine-carboxyl groups. Sodium hydroxide is a much stronger

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L 40306-65

ACCESSION NR: AP5008378

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vulcanizing agent than the amines. The authors suggest that when carboxyl-bearing rubber is vulcanized by oxides, hydroxides, or salts of bivalent metals, the crosslinkages are mainly neutral salts or basic salts linked together by hydrogen bonds. One of the characteristic features of pure-gum rubber from carboxyl-bearing crude rubber is its great strength when monovalent or divalent metals are used in vulcanization. This strength is due to the vulcanization structure, having a capacity for regrouping during strain, allowing local overstrains to be dissipated. These properties are possessed also by pure-gum vulcanizates of natural rubber when the crosslinkages are semipolar, hydrogen, or ionic. Such crosslinkages are thus guarantees of strong vulcanizates obtained from different types of natural rubber. Orig. art. has: 4 figures.

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